Translation

PCT/JP2003/007813

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference YG2003-18PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP2003/007813	International filing date (*day/month/year*) 19 June 2003 (19.06.2003)	Priority date (*day/month/year*) 21 June 2002 (21.06.2002)
International Patent Classification (IPC) or national classification and IPC A61K 31/395, 31/496, A61P 3/10, 9/00, 27/02, 29/00, 35/00, 43/00, C07D 498/08 // G01N 33/50, 33/15		
Applicant JAPAN SCIENCE AND TECHNOLOGY AGENCY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 09 December 2003 (09.12.2003)	Date of completion of this report 07 April 2004 (07.04.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP2003/007813

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the claims:

pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRE[redacted]NARY EXAMINATION REPORT

International application No. PCT/JP03/07813

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

☐ restricted the claims.

☐ paid additional fees.

☐ paid additional fees under protest.

☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with.

☒ not complied with for the following reasons:

Whereas this examination recognizes that the common technical feature of the inventions of claims 1-8 and the inventions of claims 9-11 is an angiogenesis inhibitor. However, because this substance is publicly known (if necessary, see: T YAMASHITA et al., A NEW ACTIVITY OF HERBIMYCIN A: INHIBITION OF ANGIOGENESIS, J Antibiotics, 1989, Vol. 42, p. 1015-7), the inventions of claims 1-8 and the inventions of claims 9-11 are not so related as to share a special technical feature that extends beyond the scope of prior art.

Thus, the inventions of claims 1-8 and the inventions of claims 9-11 do not constitute one group of inventions so linked as to form a single general inventive concept.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

☒ all parts.

☐ the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/JP03/07813

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	10, 11	YES
	Claims	1-9	NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Documents

1. DEMKOW, Urszula et al., the influence of rifampicin on selected parameters of immunological response, Pneumonologia i Alergologia Polska, 1998, Vol. 66, No. 1-2, p. 45-53
2. T. YAMASHITA et al., A NEW ACTIVITY OF HERBIMYCIN A: INHIBITION OF ANGIOGENESIS, J Antibiotics, 1989, Vol. 42, p. 1015-7)
3. Yoshimasa UEHARA, Mechanism of Action of an Inhibitor of *src* Oncogene Group Tyrosine Kinases and Its Effects on Cell Transformation and Growth, Advances in Pharmaceutical Sciences, 1992, Vol. 8, p. 82-95
4. WO 01/11086 A2 (EOS BIOTECHNOLOGY, INC.) February 15, 2001
5. Masayoshi SHICHIRI et al., Antiangiogenesis signals by endostatin, FASEB Journal, 2001, Vol. 15, p. 1044-53

Claims 1-8

Based on the descriptions in documents 1-3 cited in the international search report, the inventions of claims 1-8 lack novelty and an inventive step.

Document 1 states that rifampicin, which is an ansamycin antibiotic, inhibits angiogenesis.

Document 2 states that herbimycin A, which is an ansamycin antibiotic, inhibits angiogenesis.

In this context, with the knowledge obtained from the descriptions in documents 1 and 2, persons skilled in the art can easily expect that other ansamycin antibiotics with similar structures to the antibiotics described in documents 1 and 2 might exhibit the same inhibitory effect on angiogenesis, and verify the inhibition of angiogenesis by the above ansamycin antibiotics (if necessary, see document 3, Fig. 5, etc.).

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

From reading the description in the Specification, the structures of the substances included in the expression "pharmacologically acceptable derivatives" of claim 1 are unclear, and therefore the scope of the drugs in the inventions of this application is too vague.

As a result, the inventions of claims 1, 2, and 4-8, as well as the Specification, do not satisfy the requirement of specificity to the extent that a meaningful international search can be conducted.

In this report the preliminary examination was conducted based on the examples of the "pharmacologically acceptable derivatives" described in the Specification.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Box V:

Claims 9-11

Based on the description in document 4 cited in the international search report, the invention of claim 9 lacks novelty and an inventive step.

Although the inventions of claims 10 and 11 are novel with respect to documents 4 and 5, they lack an inventive step with respect to documents 4 and 5.

Document 4 describes an invention corresponding to the invention of claim 9 of this application (particularly, see claims 1 and 3; page 2, lines 2 to 5, etc.).

In addition, document 4 lists endostatin as a drug that causes a change in the amount of gene expression, which forms the basis for detecting angiogenesis inhibitors, and persons skilled in the art can easily use the above compound as a drug that causes such a change (see page 14, lines 21 to 28).

Furthermore, document 5 describes a gene family that corresponds to the gene family involved in angiogenesis in the description of claim 11 of this application, and it states that the changes in the amount of expression of the genes in this gene family are caused by endostatin. Therefore, persons skilled in the art can easily select genes from the gene family described in document 5 as genes that exhibit a change in the amount of gene expression, which form the basis for detecting angiogenesis inhibitors.